

Name \_\_\_\_\_ Core \_\_\_\_\_

## Coordinate Plane Activity

Follow the directions on the graph paper given:

1. Create your coordinate plane by folding the paper into fourths and using the creases as an x and y axis.
2. Label your x and y axis. The horizontal number line (side to side) is the x axis and the vertical number line (up and down) is the y axis.
3. Number your x and y axis and label the origin (0,0).

Great Job! Now let's plot some points!

4. Graph and label the following points:

$$A = (-4, 4)$$

$$B = (-4, 12)$$

$$C = (-11, 4)$$

What shape did you draw? \_\_\_\_\_

5. Translate this figure moving each point 12 units to the right ( $x + 12$ ) and 2 units down ( $y - 2$ ).
6. Write down the new coordinates for the new vertices:

$$A' = ( \quad , \quad )$$

$$B' = ( \quad , \quad )$$

$$C' = ( \quad , \quad )$$

7. The original shape is in which quadrant? \_\_\_\_\_  
The new shape is in which quadrant? \_\_\_\_\_

8. Label your quadrants and describe the pattern for each:

Quadrant 1: (      ,      )

Quadrant 2: (      ,      )

Quadrant 3: (      ,      )

Quadrant 4: (      ,      )

9. Which quadrant would the point: (-3.1112, 599) lie in and explain how you would know this?

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10. Plot the following points for your first shape, connecting the points as you plot:

$$D = (-8, -3)$$

$$E = (-4, -8)$$

$$F = (-4, -13)$$

$$G = (-8, -18)$$

11. What shape is DEFG? \_\_\_\_\_

12. Now, plot your second shape using the following coordinates, connecting the points as you plot.

$$M = (8, -3)$$

$$N = (4, -8)$$

$$O = (4, -13)$$

$$P = (8, -18)$$

13. What shape is MNOP? \_\_\_\_\_

14. Compare the two shapes. Choose the letter below that best describes the relationship between DEFG and MNOP.

A.  $180^\circ$  counter clockwise rotation

B. Reflection across the x axis

C.  $90^\circ$  clockwise rotation

D. Reflection across the y axis